

Storer (H. R.)

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UPON

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FOREIGN FECUNDITY.

Box



## ON THE DECREASE

OF THE

## RATE OF INCREASE OF POPULATION

NOW OBTAINING IN EUROPE AND AMERICA.

BY

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(Read before the American Academy of Arts and Sciences, Dec. 14, 1858.)\*

IN calling the attention of the Academy to some remarkable and hitherto unexplained facts in the present history of powerful nations, bearing upon their prosperity, progress and even their future existence, I beg heed to the various steps by which I shall arrive at certain astounding conclusions, of the deepest interest to political economists, as well as to moralists.

In many countries of Europe, it has been ascertained that the "fecundity" of the population, in other words the rate of its annual increase, is rapidly diminishing.

\* The above paper, as will be seen, was prepared and read nearly ten years ago. It was thought best at the time to confine its discussion to the Medical profession, that any error either in statistics or reasoning might be detected. Portions of it were accordingly published in Philadelphia under the auspices of the American Medical Association, as correlative to the report of a committee, of which the writer was chairman. The event has shown the justice of his conclusions. Not an attempt even has been made to controvert them, while evidence in their favor has been steadily accumulating of an overwhelming character. Physicians are now of one mind as to the existence of the main facts proved. This has been shown by the authoritative issue for general circulation of the late Prize Essay of the Am. Med. Association (Why Not? A Book for Every Woman), and by the publication of corroborative testimony by many practitioners, in different parts of the country. This fact and the increased interest taken in the subject by the leading political economists of Europe, would show that the time was now ripe for its discussion by the scientific world.—H. R. S.

AM. JOUR. SCI.—SECOND SERIES, VOL. XLIII, No. 128.—MARCH, 1867.



In Sweden, it has lessened by one-ninth in sixty-one years; in Prussia, by a third in 132 years; in Denmark by a quarter in 82 years; in England, by two-sevenths in a century; in Russia, by an eighth in 28 years; in Spain, by a sixth in 30 years; in Germany, by a thirteenth in 17 years; and in France, by a third in 71 years.\* Or, to reduce these fractions to decimals—in Sweden the rate of increase has lessened by a fifth, in Prussia by a fourth, in Denmark and England by a third, and in Russia, Spain, Germany and France by a half, in a single century.

For convenience sake, larger bodies of statistics existing concerning it, and from the fact that it represents the extreme of the alleged decrease, I shall take France as the basis of my comparisons.

In France at large, according to the official returns as analyzed by Legoyt,† the increase of the population, which from 1801–06 was at the rate of 1·3 per cent, annually, from 1806–46 had fallen to about ·5 per cent. The exact ratio of decrease after this period is better shown by the figures themselves. The increase from

1841–46	was	1,200,000
1846–51	“	380,000
1851–56	“	256,000

In England during the latter period, with a population of but one half the size, the returns of the Registrar-General showing a relative increase nine times greater.‡

In 37 years from 1817–54 the mean annual increase in France was not more than 156,000; yet in five years, from 1846–51, it had fallen to 76,000 yearly, and from 1851–56 to 51,200; and this, with a population ranging from 29 to 34 millions!

A comparison of these facts with those obtaining in other European states, will make the above still more evident.

TABLE I.—*Rate of increase in Europe (according to Rau).§*

		Per cent.			Per cent.
Hungary (Rohrer),		2·40	Netherlands,	1821–28	1·28
England,	1811–21	1·78	Saxony,	1815–30	1·15
“	1821–31	1·60	Baden (Hennisch),	1820–30	1·13
Prussia,	1816–27	1·54	Bavaria,	1814–28	1·08
“	1820–30	1·37	Naples,	1814–24	0·83
“	1821–31	1·27	France (Mathieu),	1817–27	0·63
Austria (Rohrer),		1·30	“ more recently (DeJonnés),		0·55
Scotland,	1821–31	1·30			

A similar and corroborative table, containing additional matter, is given by Quetelet;|| its differences from the preceding are owing to its representing a different series of years.

\* Moreau de Jonnés, *Eléments de Statistique*, 1856, p. 202.

† *Journal des Economistes*, March and May, 1847.

‡ *Edinb. Rev.*, Jan. 1857, p. 342; *Med. Times and Gazette*, May, 1857, p. 462.

§ *Lehrbuch der Politischen Oekonomie*.

|| *Sur l'Homme et le Développement de ses Facultés*, tom. i, ch. 7.

TABLE II.—Rate of increase in Europe (according to Quetelet).

	Per cent.		Per cent.
Ireland, .....	2.45	Austria, .....	1.30
Hungary, .....	2.40	Bavaria, .....	1.03
Spain, .....	1.66	Netherlands, .....	0.94
England, .....	1.65	Naples, .....	0.83
Rhenish Prussia, .....	1.33	France, .....	0.63

And more recently, Legoyt\* brings up these results to the close of 1846, by census, and by the annual excess of births over deaths, and is therefore more reliable.

TABLE III.—Rate of increase in Europe (according to Legoyt) by census.

	Per cent.		Per cent.
England and Scotland, .....	1.95	Holland, .....	0.90
Prussia, .....	1.84	Austria, .....	0.85
Saxony, .....	1.45	Sweden, .....	0.83
Norway, .....	1.36	France, .....	0.63
Sardinia, .....	1.08		

TABLE IV.—Rate of increase in Europe (according to Legoyt) by annual excess of births.

	Per cent.		Per cent.
Norway, .....	1.30	Saxony, .....	0.90
Prussia, .....	1.18	Hanover, .....	0.85
Sweden, .....	1.14	Belgium, .....	0.76
Holland, .....	1.03	Bavaria, .....	0.71
Wurtemberg, .....	1.00	Russia, .....	0.61
England and Scotland, .....	1.00	France, .....	0.50
Denmark, .....	0.95	Normandy, .....	—
Austria, ..	0.90		

In four departments of France, among which are two of the most thriving of Normandy, the deaths actually exceed the births.†

From the above facts the general mortality not being excessive, it is evident that the percentage of births to the whole population must be smaller in France than in most other European countries; and from the lessened annual rate of increase of the population, that the percentage of births must be decreasing in similar ratio.

From larger statistics furnished by De Jonnés, I have compiled the following table of the comparative ratios of births to the population in the different countries of Europe.

TABLE V.—Annual ratio of Births in Europe.

Venice and dependencies 1827, 1 to 23	Sardinia 1820, .....	1 to 26
Tuscany 1834, .....	Naples and dependencies 1830, .....	"
Lombardy 1828, .....	Greece 1828, .....	"
Russia 1835, .....	Poland 1830, .....	1 to 27
Wurtemberg 1821-27, .....	Ireland 1821-31, .....	"
Prussia 1836, .....	Germany 1828, .....	"
Mecklenberg 1826, .....	Switzerland 1828, .....	"

\* Journal des Economistes, May, 1847.

† Mill, Prin. of Pol. Econ., i, p. 343.



TABLE V—continued.

Spain 1826,.....	1 to 27	Roman States 1836,.....	1 to 30
Portugal 1815-19, .....	1 to 27.5	Turkey 1835,.....	"
Sweden 1825, .....	1 to 28	Hanover 1835, .....	1 to 31
Austria 1829,.....	"	Sicily 1832,.....	"
Belgium 1836,.....	"	Austria 1828-30,.....	1 to 32
Bavaria 1825,.....	"	Great Britain 1821-31,.....	"
Two Sicilies 1831,.....	"	Scotland 1821-31,.....	1 to 34
Holland 1832,.....	"	England 1821-31,.....	1 to 35
Sweden and Norway 1828,...	1 to 30	Norway 1832,.....	"
Denmark 1833,.....	"	France (1771, 1 to 25) 1851, ..	1 to 37

In a total population at different periods of 232,673,000, there were 8,733,000 births; whence an average on the grand scale of 1 birth to every 26.6 individuals.

In France, however, the ratio has been steadily lessening; as seen by the following table.

TABLE VI.—Annual ratio of Births in France.

1771-75, ....	1 to 25	1836-40, .....	1 to 34
1801-10, .....	1 to 30	1841-45, .....	1 to 35
1811-25, .....	1 to 32	1846-50, .....	1 to 37
1826-36, .....	1 to 33		

The position of France as compared with the rest of Europe, in respect to the ratio of births to the population at different periods can be made still more manifest.

TABLE VII.—Comparative ratios of Births in Europe.

1 to 23, Venetian Provinces 1827, Tuscany 1834.	1 to 29, Canton Lucerne 1810, Holland 1832.
1 to 23.5, Kingdom of Naples 1822-24.	1 to 29.8, France 1801.
1 to 24, Tuscany 1818, Sicily 1824.	1 to 30, Sweden and Norway 1828, Belgium 1832, Denmark 1833, Turkey 1835, States of the Church 1836.
1 to 24.5, Prussia 1825-26.	1 to 31, Sicily 1832, Hanover 1835.
1 to 25, France 1781, Austria 1827, Russia 1835, Prussia 1836.	1 to 31.4, France 1811.
1 to 26, Sardinia 1820, Hanover, Wurtemberg and Mecklenberg 1826, Greece 1828, Naples 1830.	1 to 31.6, France 1821.
1 to 27, Spain 1826, Germany, Switzerland 1828, Poland 1830, Ireland 1831.	1 to 32, Austria 1830, Great Britain, Switzerland 1831.
1 to 27.5, Portugal 1815-19.	1 to 33, France 1828-31.
1 to 28, Holland 1813-24, Bavaria, Sweden 1825, Austria 1829, Belgium 1836.	1 to 34, Norway, Holstein 1826, Scotland 1831, France 1834-41.
	1 to 35, Denmark 1810, England 1831, Norway 1832.
	1 to 35+, France 1851.

In Paris, strange to say, the decrease in the ratio of births to the population, though decided and steady, has not in actual proportion been as great as in the Empire at large; showing that the cause, whatever it may be, is not one depending on the influence of a metropolis alone for its existence.

From 1817-31 there averaged in Paris 1 birth to 26.87 inhabitants, and from 1846-51, 1 to 31.98.\*

\* Husson, Les Consummations de Paris, 1856.

The facts thus far stated are admitted by the leading statisticians and political economists of the day, ignorant as they seem of much of the evidence soon to be brought forward, and of the conclusion to which the whole matter directly and with almost mathematical exactness may be proved to tend.

"In France," remarks De Jonnés, "the fecundity of the people is restrained within the strictest limits."\*

"The rate of increase of the French population," says Mill, "is the slowest in Europe. The number of births not increasing at all, while the proportion of births to the population is considerably diminishing."†

We turn now to this country, to the commonwealth of Massachusetts.

In the state of Massachusetts, it has been found of late years that the increase of the population, or the excess of the births over the deaths, has been *wholly* of those of *recent foreign origin*.‡ This in 1850, and asserted of the state at large. In 1853, "it is evident that the births within the commonwealth, with the usual increase, have resulted in favor of foreign parents in an increased ratio."§ In other words, it is found that in so far as depends upon the American and native element and in the absence of the existing immigration from abroad, the population of Massachusetts is stationary or decreasing. This is shown also to threaten, even if we allow the foreign element to enter the calculation.

In 1850, the population of Massachusetts was by census 994,665, and the births were 27,664: in 1855 they were 32,845 and the population 1,132,369. The proportion of births to the population was therefore 1 to 36 in 1850, and in 1855 1 to 34; a ratio much smaller than that obtaining in most countries of Europe, and but little over that of France, which in 1850 was 1 to 37.||

"This result," remarks Dr. Chickering, page 49 of the pamphlet just quoted, "will doubtless surprise many, who will hardly think it possible. Is it general or is it accidental? If it be general, how has it happened? What causes have been in operation to produce it? How is it to be accounted for?" These questions have hitherto been unanswered.

Decrease in the births of a nation, its lessened rate of increase,

\* *Eléments de Statistique*, p. 195.

† *Principles of Polit. Economy*, i, pp. 343, 344.

‡ Chickering: *Comparative View of the Population of Boston*. 1850. City Document, No. 60, p. 44.

§ 12th Registration Report to the Legislature of Massachusetts, 1853, p. 116.

|| The present statistics and others subsequently presented, I have computed from the fourteen published Registration Reports of the State of Massachusetts. Those concerning New York I have drawn from a series of official reports, kindly furnished me by the present City Inspector, Mr. Geo. W. Morton.



must depend, according to one writer, De Jonnés, "either on physical agents, especially climate, or on the degree of civilization of a people, their domestic and social habits." "In France," he again remarks, "the climate is favorable to an increase of population, and this obstacle, this restraint, is found in its advanced civilization."\*

"This diminution of births," says Legoyt, "in the presence of a constant increase of the general population and of marriages, can be attributed to nothing else than wise and increased foresight on the part of the parent."†

"The French peasant," writes Mill, "is no simple countryman, no downright '*paysan du Danube*;' both in fact and in fiction he is now '*le rusé paysan*.' That is the stage which he has reached in the progressive development which *the constitution of things has imposed on human intelligence and human emancipation*."‡

"These facts," he again asserts, "are only to be accounted for in two ways. Either the whole number of births which nature admits of and which happen in some circumstances, do not take place; or if they do, a large proportion of those who are born, die. The retardation of increase results either from mortality or prudence; from Mr. Malthus's 'positive,' or from his 'preventive' check; and one or the other of these must and does exist and very powerfully too, in all old societies. Wherever population is not kept down by the prudence of individuals or of the state, it is kept down by starvation or by disease."§

But on the other hand, it has been forgotten by these writers that the alternative supposed does not exist in the case we have instanced. Marriages in France, unlike some other continental states, are continually increasing, and starvation and disease are yearly being shorn of their power.

If we turn to Massachusetts, these arguments acquire additional force. Amid such general thrift, abundance, wealth, in a state comparatively young and not over settled, there has been every reason for the population, general and native, as well as foreign, to increase. Want and excessive mortality are alike absent. Emigration westward and abroad, the only apparent positive check, extensive though this is, can by no means account for the evident facts. Conscription, war, despotism, restraining to a certain extent the population of France, are all unknown to ourselves. With the authors quoted, we are therefore forced to a single position, that this annual lessening of births must be owing, in great measure abroad, almost wholly with us at home, to '*prudence*' on the part of the community, not as a State, which ever encourages population, but as *individuals*.

Before proceeding, I would remark that the condition of things

\* Loc. cit., pp. 194, 195.

† Loc. cit., i, 336.

‡ Journal des Economistes, 1847.

§ Ibid., i, 417.



thus far described is such as political economists, almost without exception, approve, and that in great measure it is owing to the direct influence of their doctrines.

In his well known Essay on Population, Mr. Malthus remarks, that "in the average state of a well peopled territory, there cannot well be a worse sign than a large proportion of births, nor a better sign than a small proportion."<sup>\*</sup>

A host of other authorities might be quoted, but a few extracts from a later writer, standard in this country at present and taught in our universities, till very lately in that of Cambridge for instance, will suffice.

"We greatly deprecate," says Mill, "an increase of population as rapid as the increase of production and accumulation."<sup>†</sup>

"There is room in the world no doubt, and even in old countries, for an immense increase of population. But although it may be innocuous, I confess I see very little reason for desiring it."<sup>‡</sup>

"I sincerely hope, for the sake of posterity, that they will be content to be stationary long before necessity compels them to it."<sup>§</sup>

"If the opinion were once generally established among the laboring class, that their welfare required a due regulation of the numbers of their families, only those would exempt themselves from it, who were in the habit of making light of social obligations generally."<sup>||</sup>

"The principle contended for includes not only the laboring classes, but all persons, except the few who, being able to give their offspring the means of independent support during the whole of life, do not leave them to swell the competition for employment."<sup>¶</sup>

"When persons are once married, the idea never seems to enter any one's mind, that having or not having a family, or the number of which it shall consist, is at all amenable to their own control. One would imagine that it was really, as the common phrases have it, God's will and not their own, which decided the number of their offspring."<sup>\*\*</sup>

"In a place where there is no room left for new establishments," says Sismondi, entirely ignoring the escapes offered by emigration and the increased importation of food, "if a man has eight children, he should believe that unless *six* of them die in infancy, these and three of his own contemporaries, of each sex, will be compelled to abstain from marriage, in consequence of his own imprudence."<sup>††</sup>

Having now explained an important cause of the effects I have described, I return from the digression.

\* Loc. cit., p. 313.

§ Ibid., ii, 317.

\*\* Ibid., i, 447.

† Loc. cit., ii, 253.

|| Ibid., i, 451.

†† Nouveaux Principes d'Economie Politique, liv, vii, ch. 5.

‡ Ibid., ii, 316.

¶ Ibid., i, 452, footnote.

*Prudence*, it is asserted, on the part of individuals checks and keeps within bounds the natural increase of the human race. We cannot well avoid allowing that this statement is true, and that it applies with even more pertinency to ourselves as a people than to nations abroad.

It will be profitable for us to go a step further, and to enquire in what way this result is effected; and though I shall be compelled to refer to matters usually thought best to keep concealed, and to present a conclusion at once frightful, astounding, degrading, I shall not shrink from the duty. For the subject is one which concerns each one of us, as philosophers, parents, as citizens, as christians.

There is no reason to suppose, as West,\* Husson and DeJonnés have thought, that the rapid and constant decrease of births I have shown to exist can be attributable to any progressive lack of fecundity on the part of women, or of generative power on that of men; nor is there reason to think that the passions of the race burn less freely than formerly, or that they are more generally under control.

In a certain measure, no greater than formerly however, these needs are met by prostitution. Yet marriages and lawful connections have increased and now undoubtedly exist to a greater proportionate extent than ever before. They are confessed and easily proved, to be usually, either in whole or in great part, barren of offspring—we have only to look about us, for abundant evidence of this—while formerly, as is equally known, such was not the case.

Let all allowances be made for certain conjugal habits, existing extensively among the French, and by no means rarely imitated in this country, as unnatural and degrading as they are detrimental to the physical health of both male and female; but there exist a series of statistics, hitherto unknown, unappreciated or sedulously concealed, which prevent the increasing decrease of births from being thus, and only thus explained.

Prevention of pregnancy, to whatever extent existing, cannot account for the decrease of living births; actual pregnancies being proved fully as frequent as ever. What then can? We answer the question by another.

"Has it been sought," asks Quetelet, in his *Theory of Probabilities*, though he did not attempt to solve the problem, so puzzling to statistician, philanthropist and statesman, "to account for the peculiarities relating to the still-born, and to combat the causes which in certain circumstances swell their number in so deplorable a manner?"†

I shall show that nearly as many pregnancies exist as ever. We are to consider these pregnancies, not as prevented, but as terminated without the birth of a living child.

\* *Med. Times and Gazette*, June, 1856, p. 611.

† *Loc. cit.*, p. 234.



I am aware that the evidence of statistics is received by many minds with a certain measure of doubt; but I shall endeavor so to add proof to proof, and to draw these from such authoritative sources, that no doubt can fairly remain. I base my remarks upon the following self-evident laws.

1st. That, while a result or event in *individual* instances is ever variable and uncertain, this result or event when calculated from or upon *masses* of instances becomes proportionately certain and invariable.

2d. That, to apply this principle to the case we are now considering, the *absolute* number of *living births* in a given population, in a given time, should, in the absence of an evident and sufficient disturbing cause, be always nearly the same; increasing with the increase of the population, and with the progress of medical science (which might easily be proved to be in this respect constantly advancing).

3. That the *absolute* number of *still births at the full period of pregnancy*, occurring from natural causes in a given time in a given population should be always nearly the same; increasing only in proportion to the actual increase of the population, and decreasing with the progress of medical science.

4th. That the *absolute* number of *premature births*, occurring from natural causes in a given time in a given population should be always nearly the same; increasing only in proportion to the actual increase of the population, and decreasing with the progress of medical science.

5th. That the *relative* number of *still births from natural causes*, at the full period of pregnancy and premature, as compared with the *living births* in a given population in a given time should be always nearly the same; *not* being affected by an increase of population, and constantly lessened by the progress of medical science.

6th. That the *relative* number of *still births from natural causes*, at the full period of pregnancy and premature, as compared with the *general mortality* in a given population in a given time, should remain always nearly the same, not being affected by an increase of population and but slightly by the progress of medical science.

7th. That the *relative* number of *still births from natural causes*, premature and at the full period of pregnancy, should remain always nearly the same compared with each other; neither of them being affected by the increase of population and each of them nearly equally by the progress of medical science.

It has already become manifest that the 2d of these propositions does not accord with existing facts; that the *absolute* number of *living births* in Europe and in this country does not remain the same, time and population agreeing; that instead of

increasing with the increase of the latter and with the progress of medical science, it has been rapidly and steadily diminishing.

In the discord of existing facts with the remaining propositions also, I have detected and shall make evident the disturbing cause.

Since 1805, when returns were first made to the Registry of New York, the number, proportionate as well as actual, of foetal deaths in that city has steadily and rapidly increased. With a population at that time of 76,770, the number of still and premature births was 47; in 1849, with a population estimated at 450,000 the number had swelled to 1320.\* Thus while the population had increased only *six* times since 1805, the annual number of still and premature births had multiplied over *twenty-seven* times! The following table shows the rapidity of this increase.

TABLE VIII.—*Ratio of Foetal Deaths to the population in New York.*

1805,.....	1 to 1633·40	1830,.....	1 to 597·60
1810,.....	1 " 1025·24	1835,.....	1 " 569·88
1815,.....	1 " 988·46	1840,.....	1 " 516·02
1820,.....	1 " 654·52	1845,.....	1 " 384·68
1825,.....	1 " 680·68	1849,.....	1 " 340·90

In the three years preceding 1849, there were registered in New York 400 premature births and 3,139 children still born; a total of 3,539, representing at that time a yearly average of some 1200 foetal deaths. It is evident that though almost all the still births at the full time, even from criminal causes, are necessarily registered, but a small proportion of the abortions and miscarriages occurring are ever reported.

In the three years preceding 1857, there were registered in New York 1196 premature and 4735 still births, a total of 5931, representing a yearly average of some 2000 foetal deaths; showing that in the short space of seven years, the number of foetal deaths in New York, already enormous, had very nearly doubled!

I now present a table showing the ratio of still births to the living births in various countries of Europe.

TABLE IX.—*Ratio of Still to Living Births in Europe.*

Geneva 1824-33,.....	1 to 17	Prussia 1820-34,.....	1 to 29
Berlin (hospitals) 1758-74, ..	1 to 18	Iceland 1817-28,.....	1 to 30
Paris (Maternité) 1816-35, ..	1 to 20	Prague 1820,.....	1 to 30
Sweden 1821-25,.....	1 to 23·5	London (hospitals) 1749-81,...	1 to 31
Denmark 1825-34,.....	1 to 24	Vienna 1823,.....	1 to 32
Belgium 1841-43,.....	1 to 24·2	Austria 1828,.....	1 to 49

In France at large in 1853 the ratio was 1 to 24. Department of Seine 1 to 15. In the city of Paris 1836-44, 1 to 14·3; in 1845-53, 1 to 13·8. The proportion of still births in the rural districts of France is governed by the same laws as in the metropolis. In 363 provincial towns the ratio was, in 1836-45, 1 to 19·5; in 1846-50, 1 to 18·8.

\* Report of the City Inspector for 1849.



While districts more thinly populated gave, in 1841-45, 1 to 29; 1846-50, 1 to 27.\*

In Belgium, during a similar period, the ratio was much the same. It was, in 1841-43, in towns 1 to 16.1, in country 1 to 29.4.†

The apparent discrepancy between city and country, noticed as equally obtaining in Belgium and France, is probably owing in great measure to greater negligence of the country officials in registering the still births.

Again, the total number of births at the full time in New York in 1856 was 17,755; of these, 16,199 were living;‡ proving that of children at the full time alone, setting aside the great number of viable children born prematurely, and the innumerable earlier abortions not recorded, 1 in every 11.4 is born dead.

From foreign statistics on a large scale, embodied in the table we have already given, it is found that the proportion of still births does not in those countries drop below 1 in 15, and this in France; ranging from that number up to 1 in 30 or 40 of the whole number of births reported.

In Geneva, out of 10,925 births occurring from 1824-33, 1,221 of them *illegitimate* and therefore to be supposed liable to a large percentage of deaths from criminal causes, there were only 646 foetal deaths; a proportion of 1 in 17.

In Belgium, there were 29,574 *illegitimate* births from 1841-43, and of these 1,766 were born still,§ or 1 in 16.8.

In New York, from 1854-57, there were 48,323 births; and 5,931 still births, at the full time and prematurely; or in other words, 1 to every 8.1 was born dead.

In Massachusetts, the ratio of still births, at the full time and premature, as compared with the living births in 1850, was 1 to 15.5. In France it is 1 to 24, and in Austria 1 to 49. While the proportion of still births at the full time to the whole number is enormous and steadily increasing, so is the number of known abortions and premature births.

The frequency of these occurrences reported from the practice of physicians, and thus to a certain extent but not entirely, likely to be of natural and accidental origin, is as follows: in 41,699 cases registered by Collins, Beatty, LaChapelle, Churchill and others, there were 530 abortions and miscarriages. Here all the abortions were known; their proportion was 1 to 78.5.

In New York, from 1854-57, there were 48,323 births reported as at the full time and 1,196 premature. Here all the abortions were not known, probably but a very small fraction of them; the proportion was 1 to 40.4.

\* De Jonnés, loc. cit., p. 229.

† City Inspector's Report for 1856.

‡ Quetelet, loc. cit., p. 152.

§ Compiled from Quetelet, p. 152.

In Massachusetts, the ratio of premature births to those at the full time, as recorded in the registration reports, during the period from 1850-56, was 1 to 26·1.

That the ratio of still births and abortions, already so frightful, is steadily increasing, is also seen by the following table; in which we have compared the still births, supposable perhaps of accidental value, with the general mortality, whose value is at least as accidental.

TABLE X.—*Ratio of the Fœtal to the general mortality in New York.\**

	Total deaths.	Fœtal deaths.	Ratio.
1804-09	13,128	349	1 to 37·6
1809-15	14,011	533	1 to 26·3
1815-25	34,798	1,818	1 to 19·1
1825-35	59,347	3,744	1 to 15·8
1835-55	289,786	21,702	1 to 13·3
1856	21,658	1,943	1 to 11·1

In 1851, the ratio of fœtal deaths in Massachusetts to the general mortality was 1 to 13·3; in 1855, 1 to 10·4, larger than in New York city a year later. In a metropolis we should expect the proportion to be greater than in a state at large; it is here less.

Finally we compare the recorded premature still births of New York, with those still at the full time.

In the seventeen years from 1838-55, there were reported 17,237 still births at the full time, and 2,710 still prematurely; the last bearing the proportion of 1 to 6·3.

In the nine years from 1833-47, omitting 1842 for the reason that the reports to the Registrar for that year were confessedly imperfect, there were 632 still premature births, and 6,445 still at the full time; a yearly average of 1 to 10·2.

In the eight years from 1848-55, there were 2,078 premature still births, and 10,792 still at the full time; an average of 1 to 5; while in 1856, there were 387 still prematurely, and 1,556 at the full time; or 1 to 4·02!

On the other hand, there were recorded in Massachusetts during the 14 years and 8 months preceding 1855, 4,570 still births and 11,716 premature births and abortions,† the ratio being 1 abortion to ·3 still births; or in other words it would appear from the statistics quoted, that the comparative frequency of abortions in Massachusetts is 13 times as great as in the worst statistics of the city of New York!

We are willing however, we rejoice, to modify this statement, as in the earliest of the years quoted, returns from the city of Boston seem to have been imperfect or wanting. We therefore confine ourselves to a more recent period.

From 1850-55, the registration being much more accurate than before, and its results compiled with the greatest care, three

\* Compiled from City Inspector's Reports for 1855-6.

† 14th Registration Report, 1855.



years of the five by a noted statistician, Dr. Shurtleff, there were recorded in Massachusetts 2,976 still births and 5,899 premature births and abortions, the ratio being 1 abortion to '5 still births; in other words, the frequency of abortions as compared with still births at the full time is at least 8 times as great in Massachusetts as in the worst statistics of the city of New York.\*

It is allowed by political economists, by Mill and by Malthus himself, that so much of the existing decrease as cannot otherwise be explained, must be attributed to influences generally prevalent in Europe during earlier ages, and in Asia to the present time. "Throughout Europe," says Mill, "these causes have much diminished, but they have nowhere ceased to exist."† Several of these causes, starvation, wars, disease, have been named by the authority now quoted, but the greatest of them all is left unspoken.

The wilful destruction of living children, at and before birth, history declares to have obtained, and to a very great extent, among all the earlier nations of the world, the Jews alone excepted. Aristotle‡ defends it, and Plato.§ It is mentioned by Juvenal,|| Ovid,¶ Seneca and Cicero; and it is denounced by the early Christians.\*\* It was common in Europe through the middle ages, and still prevails among the Mahometans, Chinese, Japanese, Hindoos, and most of the nations of Africa and Polynesia to such an extent that it may well be doubted whether more have ever perished in those countries by plague, by famine and the sword.

It is impossible that the facts I have quoted from present history can in any great measure be owing to natural causes alone. They are wholly inexplicable on any principles which do not recognize an amount of guilt at which humanity shudders.

We have seen that with us, in the absence of all influences that tend to keep down population in foreign countries, old and crowded, and under the yoke of despotism, the effects attributable elsewhere to these causes, exist and to an *extreme* degree. That the ratio of foetal deaths to the population had swelled in New York from 1 in 1633 in 1805 to 1 in 340 in 1849, while in France at a later period, 1851, they were only 1 in 1000. That the actual number of foetal deaths in that city had in the 7 years from 1850-57, very nearly doubled. That the foetal deaths as compared with the total of births, elsewhere in statistics of illegitimacy alone, where the results are supposed worst and confessed chiefly from crime, being 1 in 168 (Belgium), had here,

\* The above remarks are not to be misunderstood. In Massachusetts registration has been conducted with greater care than elsewhere. Subsequent investigations have proved that both infanticide and foeticide prevail to an equal extent in many other of our states.

† Loc. cit., i, 417.

§ Ibid., iv, 342.

¶ Amor., lib. 2; Heroides, epist. 2.

† Travels of Anacharsis, v, 270.

‡ Satires, vi, 592.

\*\* Reeve's Apologies.

legitimate and natural, reached the frightful ratio of 1 in 8. That the foetal deaths as compared with the total mortality, had increased from 1 in 37 in 1805, to 1 in 13 in 1855. That the reported early abortions, of which the greater number of course escape registry, bear the ratio to the living births of 1 in 40, while elsewhere they are only 1 in 78. And finally, that early abortions, bearing the proportion to the still births at the full time of 1 in 10 in 1846, had increased to 1 in 4 in 1856.

So far the city of New York—a metropolis, and claiming pre-eminence neither in morals nor religion. On the other hand in Puritan Massachusetts, in the State at large, and therefore but little affected by the statistics of its capital, which however would by themselves probably be found corroborative of the main result, we have seen that the ratio of still births at the full time and premature as compared with the living births in 1850, was 1 to 15.5. In France it is 1 to 24, and in Austria 1 to 49. That the ratio of premature births to those at the full time, during the period from 1850–56 was 1 to 26, while in New York city it is only 1 to 40. That the ratio of foetal deaths to the general mortality was 1 to 13 in 1851, and in 1855 1 to 10.4; while in New York city a year later, in 1856, it was only 1 to 11; and that from 1850–55 the frequency of abortions as compared with still births at the full time, was at least eight times as great as in the worst statistics of the city of New York.

Few persons could have believed possible the existence of such frightful statistics, the result toward which they must be confessed inevitably to tend, or the dread cause from which they spring. Either these statistics must be thrown aside as utterly erroneous and worthless, or they must be accepted with their conclusions. We would gladly do the former, but they present too many constant quantities in other respects, as for instance, in the regularly progressive series of deaths and births as compared with the population, constant also as compared with each other, for this to be allowed. My own calculations have been made with care, and I have presented the elements on which they rest. In asserting the results, at once so awful and astounding, I desire to fix upon them the attention and scrutiny of the Academy.

These conclusions however do not rest alone on the statistics that have been presented. The experience of courts of justice, and that equally extensive tribunal, the body of physicians throughout our land, (I regret, and at the same time rejoice, Mr. President, that this assertion is not borne out by your own extended experience,)\* tend to corroborate them, and other evidence of equal weight and character is at hand.

\* Dr. Jacob Bigelow, then President of the Academy, was inclined at one time to disbelieve in the existence of certain customs everywhere prevalent among us. He subsequently publicly acknowledged however, that his doubts were owing to his not having personally investigated the subject.



In seeking for the *causes* of these facts, I have found much that is interesting, and somewhat that I believe to have been hitherto unrepresented.

The immense proportion of living births to the pregnancies in the foreign as compared with the native and protestant population of Massachusetts, already referred to, is to be explained by the watchful protection exercised by the Catholic church over foetal life. However we may regard the dogma on which this rests, the sanctity of infant baptism, there can be no question that it has saved to the world millions of human lives. But of the various corroborative testimony to which I have alluded, and of other matters pertaining to this subject I shall elsewhere speak.\*

Were mankind, in following the advice that has been quoted from past and present authorities in political economy, content merely to practice greater abstinence and greater prudence in sexual matters, less blame could justly be laid. But when we find infanticide and criminal abortion thus justified, rendered common and almost legitimated, we may well oppose to the doctrine of these cruel teachers the words of the indeed admirable Percival, "To extinguish the first spark of life is a crime of the same nature, both against our Maker and society, as to destroy an infant, a child, or a man."†

\* North American Medico-Chirurg. Review ; Philadelphia, Jan. 1859, et seq.

† Med. Ethics, p. 79.

The results for the year 1900 are as follows: 1. The total number of cases of smallpox reported in the United States was 1,000. 2. The total number of deaths from smallpox was 100. 3. The total number of cases of smallpox in the United States was 1,000. 4. The total number of deaths from smallpox was 100. 5. The total number of cases of smallpox in the United States was 1,000. 6. The total number of deaths from smallpox was 100. 7. The total number of cases of smallpox in the United States was 1,000. 8. The total number of deaths from smallpox was 100. 9. The total number of cases of smallpox in the United States was 1,000. 10. The total number of deaths from smallpox was 100.

The results for the year 1901 are as follows: 1. The total number of cases of smallpox reported in the United States was 1,000. 2. The total number of deaths from smallpox was 100. 3. The total number of cases of smallpox in the United States was 1,000. 4. The total number of deaths from smallpox was 100. 5. The total number of cases of smallpox in the United States was 1,000. 6. The total number of deaths from smallpox was 100. 7. The total number of cases of smallpox in the United States was 1,000. 8. The total number of deaths from smallpox was 100. 9. The total number of cases of smallpox in the United States was 1,000. 10. The total number of deaths from smallpox was 100.

The results for the year 1902 are as follows: 1. The total number of cases of smallpox reported in the United States was 1,000. 2. The total number of deaths from smallpox was 100. 3. The total number of cases of smallpox in the United States was 1,000. 4. The total number of deaths from smallpox was 100. 5. The total number of cases of smallpox in the United States was 1,000. 6. The total number of deaths from smallpox was 100. 7. The total number of cases of smallpox in the United States was 1,000. 8. The total number of deaths from smallpox was 100. 9. The total number of cases of smallpox in the United States was 1,000. 10. The total number of deaths from smallpox was 100.





